Claims

1. In a vehicle tire pressure monitoring system having at least one tire pressure monitor transmitting a tire pressure signal that is capable of being received by both a proximately-located corresponding transponder and at least one relatively distantly-located non-corresponding transponder, a method of identifying the corresponding transponder, comprising the steps:

determining a strength of the tire pressure signal at each of the receiving transponders; and

identifying the corresponding transponder based on said signal strengths.

2. The method of claim 1, wherein said identifying step comprises:

comparing each of said signal strengths to at least one reference value; and

each said receiving transponder selectively providing the tire pressure signal to a central controller based on said comparison.

3. The method of claim 2, wherein each said receiving transponder provides the tire pressure signal to said central controller if said signal strength is greater than said reference value.

4. The method of claim 3, wherein said receiving transponder provides said tire pressure signal to said central controller via wireless transmission.

5. The method of claim 3, wherein said receiving transponder provides said tire pressure signal to said central controller via wires that physically connect said transponder to said central controller.

6. The method of claim 3, wherein said reference value is a pre-determined constant value.

7. The method of claim 3, wherein said reference value is adaptively determined based upon previous tire pressure signal strengths.

8. The method of claim 7, wherein said reference value is determined based upon the mid-point value between the respective averages of previous corresponding and non-corresponding tire pressure signal strengths.

9. The method of claim 3, wherein said reference value is the same for each of the receiving transponders.

10. The method of claim 3, wherein said reference value is different for each of the receiving transponders.

11. The method of claim 3, further comprising the steps:

said transmitting transponder providing a unique transponder identification code to said central controller; and

said central controller providing tire location information to a vehicle operator based on said unique transponder identification code.

12. The method of claim 1, wherein said identifying step comprises:

comparing said signal strengths to each other; and

identifying the corresponding transponder based on said comparison.

13. The method of claim 12, wherein the corresponding transponder is identified based on the highest relative signal strength.

14. The method of claim 12, further comprising the step of providing the signal strengths from said respective receiving transponders to a central controller and wherein said central controller performs said comparison step.

15. The method of claim 14, wherein said respective receiving transponders provides said signal strengths to said central controller via wireless transmissions.

16. The method of claim 14, wherein said respective receiving transponders provides said signal strengths to said central controller via wires that physically connect said transponders to said central controller.

17. The method of claim 12, further comprising the steps:

each of the transponders providing unique transponder identification codes to said central controller; and

providing tire location information to a vehicle operator derived from said unique transponder identification code associated with said transponder providing the largest of said signal strengths.

18. In a vehicle tire pressure monitoring system, a method of providing tire location information, comprising:

providing a tire pressure signal from a tire pressure monitor both to a proximately-located corresponding transponder and at least one relatively distantly-located non-corresponding transponder;

determining a signal strength of said tire pressure signal at each said receiving transponder;

comparing said signal strengths to at least one reference value;

each transponder transmitting said received tire pressure signal and a unique transponder identification code to a central controller if said respective signal strength exceeds said reference value; and

providing tire pressure and tire location information to a vehicle operator based on said tire pressure signal and said unique transponder identification code received from said transmitting transponder.

19. In a vehicle tire pressure monitoring system, a method of providing tire location information, comprising:

providing a tire pressure signal from a tire pressure monitor to both a proximately-located corresponding transponder and at least one relatively distantly-located non-corresponding transponder;

determining a signal strength of said tire pressure signal at each said receiving transponder;

each said receiving transponder transmitting said respective signal strength, said tire pressure signal, and a respective unique transponder identification code to a central controller;

said central controller identifying said corresponding transponder based on the largest of said signal strengths; and

providing tire location information to a vehicle operator based on said identification code of said corresponding transponder.

20. A tire pressure monitor and identification system for a vehicle, comprising:

at least one tire pressure monitor operatively connected to a vehicle tire, said tire pressure monitor adapted to collect tire pressure data for said vehicle tire;

a corresponding transponder attached to the vehicle relatively proximate to said tire pressure monitor, said corresponding transponder being adapted to receive a tire pressure signal from said tire pressure monitor that is indicative of said tire pressure data;

at least one non-corresponding transponder attached to the vehicle relatively distantly to said tire pressure monitor, said non-corresponding transponder being capable of receiving said tire pressure signal.

said corresponding transponder and said non-corresponding transponder both being adapted to detect the respective strengths of said received tire pressure signals and to transmit said tire pressure signal to a central controller if said signal strength exceeds a reference value.

21. A tire pressure monitor and identification system for a vehicle, comprising:

at least one tire pressure monitor operatively connected to a vehicle tire, said tire pressure monitor adapted to collect tire pressure data for said vehicle tire;

a corresponding transponder attached to the vehicle relatively proximate to said tire pressure monitor, said corresponding transponder being adapted to receive a tire pressure signal from said tire pressure monitor that is indicative of said tire pressure data;

at least one non-corresponding transponder attached to the vehicle relatively distantly to said tire pressure monitor, said non-corresponding transponder being capable of receiving said tire pressure signal;

said corresponding transponder and said non-corresponding transponder being adapted to detect respective strengths of said tire pressure signal;

a central controller adapted to receive said tire pressure signal, said tire pressure signal strength, and a unique transponder identification code from both said corresponding transponder and said non-corresponding transponder; and

said central controller further adapted to identify said corresponding transponder based on the relative magnitudes of said tire pressure signal strengths.

22. The system of claim 21, wherein said central controller is further adapted to provide tire pressure information and tire location information received from said corresponding transponder to a display device.